

# **Ion Collector Kit for Encore<sup>®</sup> Manual Spray Guns with nLighten<sup>™</sup>**

## **Description**

The ion collector can improve the smoothness and appearance of cured powder coatings. It collects ions emitted from the spray gun's charging electrode and reduces the rate of charge buildup in the powder deposited on the part. This may reduce defects in the cured coating such as "pin-holing" and "orange peel".

See Figure 1. The kit consists of a collector rod (1), a rod bracket (2), a shield bezel (3), and required fasteners. The distance from the end of the collector rod to the end of the spray gun is adjusted by sliding the rod through the bracket. The rod and bracket are electrically grounded through the gun cable and control unit.

A support bracket and longer rod are available to adapt the ion collector kit for use with a 150 mm lance extension.

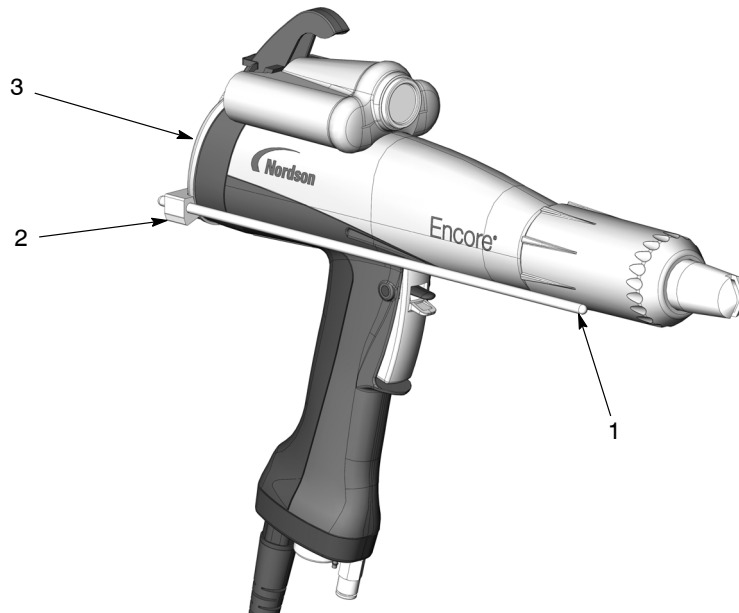


Figure 1 Ion Collector Kit Installed on an Encore Manual Spray Gun with nLighten.

- |                  |                 |
|------------------|-----------------|
| 1. Collector rod | 3. Shield bezel |
| 2. Rod bracket   |                 |

## Installation

**NOTE:** Before installing the ion collector kit on the spray gun, coat several parts. While coating the parts, write down the current ( $\mu\text{A}$ ) value shown on the control unit display. Cure the coatings. This establishes a baseline that will help you adjust the rod length.

1. See Figure 2. If installing the ion collector on a Encore LT or Encore PE manual spray gun, remove the two screws securing the rear gun housing and install the shield bezel (5) as shown. Secure with the M3 x 35 mm long pan head screw (6) in the top hole as shown.
2. Install the rod bracket (3) on the shield bezel (5) and secure with the 40 mm pan-head screw (4).
3. Slide the collector rod (1) through the bracket.
4. Install the set screw (2) into the rod bracket. Do not tighten it until you have adjusted the position of the end of the collector rod.

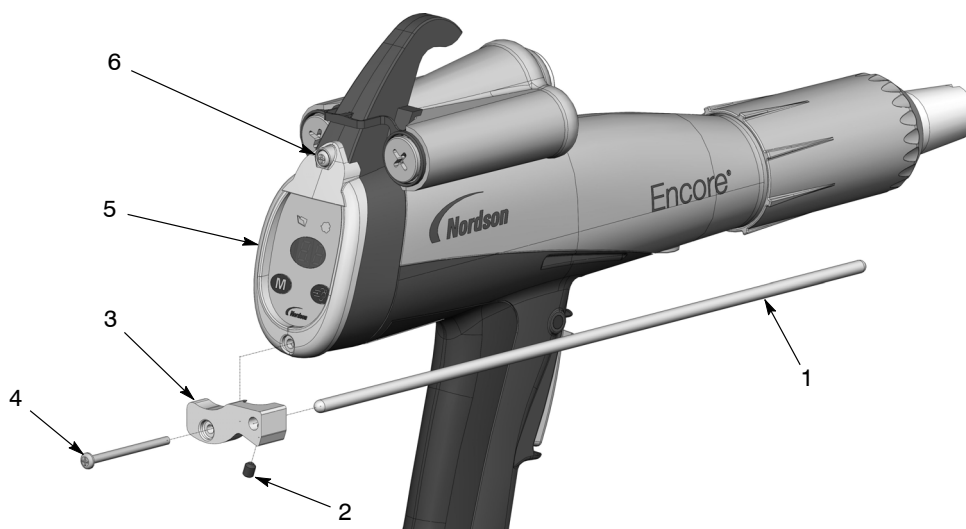


Figure 2 Installing the Ion Collector Kit on an Encore Spray Gun with a nLighten.

- |                             |                            |                            |
|-----------------------------|----------------------------|----------------------------|
| 1. Collector rod            | 3. Rod bracket             | 5. Shield bezel            |
| 2. Set screw, M4 x 5, black | 4. Pan head screw, M3 x 40 | 6. Pan head screw, M3 x 35 |

## Adjusting Rod Tip Position

After installing the ion collector kit, the user must adjust the distance from the end of the collector rod to the tip of the spray gun's charging electrode. Finding the optimum location for the rod end requires some experimentation.

If the rod end is too far away from the tip of the electrode, the ion collector will not function properly. If the rod end is too close to the tip of the electrode, powder charging and transfer efficiency may be reduced.

1. See Figure 2. Slide the collector rod (1) back through the rod bracket (3) until the end is 102-127 mm (4-5 in.) from the front end of the spray gun.

2. Start the powder coating system. While coating parts, slide the collector rod forward until the current shown on the control unit display is 5 to 7  $\mu\text{A}$  higher than the current values recorded before the kit was installed. Tighten the set screw (2) to secure the rod.
3. Cure the coating on the new parts. Compare the surface finish on these parts with the finish on the parts that were coated before installing the kit.
4. If the desired improvement in the surface finish was not obtained, loosen the set screw and slide the rod forward approximately 25 mm (1-in.). Tighten the screw.
5. Repeat steps 3 and 4 until the desired improvement in surface finish is obtained.

## Parts

See Figure 3 for this kit. See Figure 4 for rods and support bracket for lance extensions.

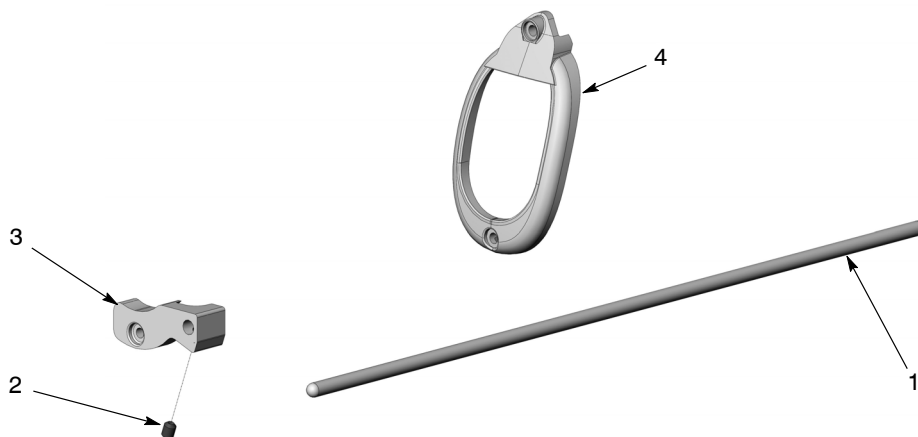


Figure 3 Ion Collector Kit

Item	Part	Description	Quantity	Note
—	1614643	KIT, ion collector, nLighten	1	
1	189482	• ROD, ion collector, 11 in.	1	
2	345225	• SCREW, set, socket, M4 x 5, cup, steel, black oxide	1	
3	1614644	• BRACKET, support, ion collector, nLighten	1	
4	1102648	• BEZEL, shield, plated	1	
NS	1614645	• SCREW, pan head, recessed, M3 x 40, zinc	1	
NS	345071	• SCREW, pan head, recessed, M3 x 35, zinc	1	
NS: Not Shown				

# Components for Standard Lance Extensions

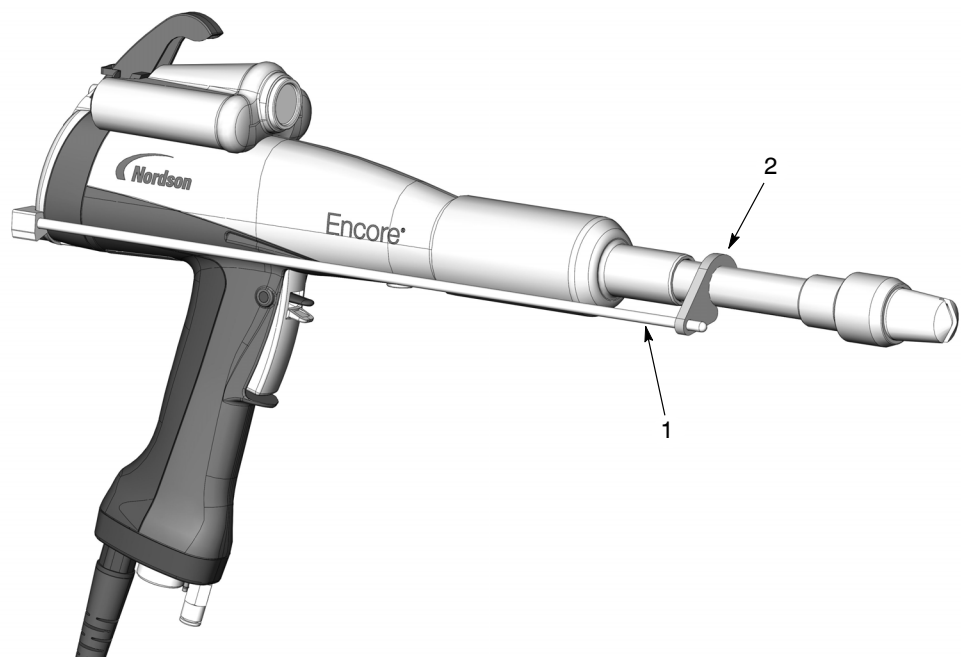


Figure 4 Components for use with Standard Lance Extensions

Item	Part	Description	Quantity	Note
1	189483	ROD, ion collector, 15 in.	1	A
2	1614647	BRACKET, lance extension, ion collector, nLighten	1	B
NOTE A: Use for 150-mm lance extension. B: Will not work with HD lance extensions.				

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